

Remarks

Claims 10-46 are pending in this application. In an Office Action dated March 11, 2004, the Examiner rejected claims 10-19 and 28-46 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,872,533 to Aras *et al.* (Aras). The Examiner rejected claims 20-27 under 35 U.S.C. § 103(a) as being unpatentable over Aras in view of U.S. Patent No. 6,049,533 to Norman (Norman). Applicants respectfully disagree with the Examiner's rejections and request reconsideration in light of the following arguments.

Independent claim 10 provides a method of distributing high-speed information packets to at least one subscriber unit. Each information packet is associated with an information channel. Each information packet is routed through a distributed network of routing elements. Each routing element is in wireless communication with at least one other routing element in the network of routing elements. Each information packet is received in a distribution center in communication with the distributed network of routing elements. Each information packet is forwarded to each subscriber unit in communication with the distribution center and requesting the information channel of which the information packet is associated.

A configuration of Applicants' distributed routing network is described on page 10, line 25, through page 11, line 10, reproduced as follows:

Distribution point 40 contains both routing and switching functionality. Access point 22 may be in contact with one or more radio access distribution points 40 over radio link 42, may be wired or cabled to distribution point 40 through wireline link 44, or may be packaged with distribution point 40. Access point 22 may also be transformed into distribution point 40, permitting access point 22 to route traffic that neither originated nor terminated with any of its serviced subscriber units 26. Distribution point 40 is in communication with at least one additional distribution point 40, the collection of interconnected distribution points forming a network of distribution points, shown generally by 41. Two distribution points may be connected by radio link 46 or wireline link 48.

Distribution points 40 may route packets within distribution point network 41 under a variety of protocols such as ATM, TCP/IP, 802.x, or the like. In a preferred embodiment, distribution point 40 includes an ATM/IP switch. Distribution point 40 then operates at both the IP routing and ATM switching layers or, in terms of the Open Systems

Interconnection (OSI) standard, at both the network layer and the data link layer.

Routing within Applicants' distributed network of distribution points is described on page 12, lines 6-20, reproduced as follows:

Each distribution point 40 receives an information packet from either another distribution point 40, from subscriber unit 26 in communication with distribution point 40 through access point 22, or from an external communication system. If distribution point 40 determines the information packet is destined for subscriber unit 26 within coverage area 24 of access point 22 in communication with distribution point 40, distribution point 40 forwards the packet to access point 22 forming coverage area 24 containing destination subscriber unit 26. If distribution point 40 determines the information packet is destined for subscriber unit 26 in coverage area 24 formed by access point 22 in communication with a different distribution point 40, distribution point 40 forwards the packet to one of distribution points 40 in communication with distribution point 40. Hence, no central MSC is required for routing. Distributed routing removes delays caused by central switching, increases the robustness of the communication system 20, increases network efficiency, and permits simplified expansion or reduction of communication system 20 by automatically adding or removing distribution points 40.

The Examiner rejected claim 10 as anticipated by Aras. The only support provided by the Examiner that Aras teaches routing information packets through a distributed network of routing elements in wireless communication is "figure 1a, 1b, 4a and 4b." Figure 1a illustrates an "interactive TV system." Figure 1b illustrates "an interactive TV system using direct TV systems" in which the home receives television signals using a satellite dish. Both of these figures illustrate standard broadcast television distribution. There is no teaching or suggestion that information is delivered as packets or that any routing of these packets takes place. Figure 4a illustrates an "interactive TV system including a behavior collection center." Figure 4b illustrates an "interactive TV system including a behavior collection center ... with respect to a satellite TV system." Once again, information is sent to the home using standard broadcast television techniques. There is no routing, no distributed network of routing elements and no information packets involved with distributing the television signals.

Aras also fails to disclose forwarding information packets from a distribution center to a subscriber if the subscriber requests the information channel of which the information packet is associated. In contrast, Aras teaches sending messages from the subscriber after the subscriber has selected which multimedia stream is to be accessed. Thus, Aras teaches only a technique for reporting user conduct and preferences, not for distributing high-speed packets. The Abstract describes Aras' invention as follows (emphasis added):

A method and apparatus for content coding of Audio-Visual materials is presented. The content coding can then be decoded by a home station where the content coding is collected and processed. The content codes are utilized by the subscribers home station to collect information *on the subscribers selection of AVM streams* and record information on which AVMs have been presented to the subscriber. An audio-video material distribution system is described for supplying AVM streams to home station via a local distribution network. The home stations decode the content coding from the AVM streams and collect the encoded content codes. The collected content codes are then sent to collection centers for processing. The encoded information may also utilized to provide management of an upstream channel between the home stations and the video distribution node.

Aras discloses a typical video distribution system wherein a plurality of channels are sent to every subscriber device. A user then selects one of these channels for access. Aras discloses collecting information about which channel is selected through the use of content codes. The content codes, describing which channel was viewed, are later sent to a collection center. This is in contrast with Applicants' invention, wherein information packets are routed to subscriber units if the subscriber unit has requested the channel of which the information packet is associated.

Aras does not teach or suggest Applicants' invention as provided in independent claim 10. Claims 11-19 depend from claim 10 and are therefore also patentable.

Claim 12 provides for transmitting each information packet to an access point operative to communicate with a plurality of subscriber units. In rejecting claim 12, the Examiner failed to find any teaching in Aras for Applicants' access point, or to even mention "access point" in the rejection.

Claim 13, which depends from claim 12, provides that at least one distribution point functions as the distribution center. The Examiner failed to identify any teaching in Aras for a distribution point which functions as the distribution center.

Claim 14, which depends from claim 12, provides that at least one access point functions as the distribution center. Again, the Examiner makes no attempt to find any teaching in Aras for an access point, let alone one that functions as Applicants' distribution center.

Claim 15, which depends from claim 10, further includes receiving a request from a subscriber unit to access an information channel, requesting transmission of the requested information channel *if no other subscriber unit is receiving the requested information channel*, and noting that the requesting subscriber unit is receiving the requested information channel. The Examiner's entire support for rejecting this claim is "columns 5-6." The cited passage appears to have nothing whatsoever to do with claim 15.

Claim 18, which depends from claim 15, provides for transmitting a dummy address as the destination for the requested transmission of the requested information channel. The Examiner's support for rejecting claim 18 is "column 20, lines 55-68," reproduced as follows:

Another feature of the present invention is the fact that certain variables (i.e., T_{SURF} and T_{AVI}) may be controlled by a node outside the home station, thus an distribution node, AVI server or a BCC can control the surfing intervals and AVI intervals so that it may better be able to manage the generation of messages using the reverse channels. This also applies to the maximum size of the BCT and whether or not the BCT may be transmitted on the fly. Thus, if the BCT size is set dynamically by the BCC, every time a BCT entry is closed, it could be transmitted or the BCC may wait until the BCT reaches a much larger number of entries. This gives the BCC tremendous flexibility in controlling the reverse channel bandwidth in the system.

This passage does not disclose transmitting a dummy address.

Independent claim 28 discloses a system for providing packetized video information to a plurality of subscriber units. A distributed routing network includes distribution points, each in radio contact with at least one other distribution point. At least one of the distribution points functions as a video distribution center.

The Examiner asserts that Aras anticipates Applicants' claim 28, citing the same figures used to support the claim 10 rejection. Once again, these figures illustrate nothing more than standard terrestrial or satellite TV broadcasting systems. There is no teaching or suggestion of a distributed routing network of distribution points in radio contact let alone of a distribution point functioning as a video distribution center.

Independent claim 28 is not anticipated by Aras. Claims 29 and 30, which depend from claim 28, are therefore also patentable.

Independent claim 31 discloses a system for providing packetized video information to a plurality of subscriber units. A distributed routing network includes distribution points, each in radio contact with at least one other distribution point. At least one access point in communication with the distributed routing network functions as a video distribution center.

The Examiner rejected claim 31 as anticipated by Aras, citing to "figures 1a and 1b and columns 4-6." Once again, these figures illustrate nothing more than standard terrestrial or satellite TV broadcasting systems. There is no teaching or suggestion of a distributed routing network of distribution points in radio contact. The Examiner makes no attempt to find any teaching in Aras for Applicants' access point.

Independent claim 31 is not anticipated by Aras. Claims 32-35 depend from claim 31 and are therefore also patentable.

Independent claim 36 provides a system for distributing high-speed information packets to at least one subscriber unit. Each information packet is associated with an information channel. A distributed network of routing elements rout each information packet. Each routing element is in wireless communication with at least one other routing element in the network of routing elements. At least one distribution center is in communication with the distributed network of routing elements and with at least one subscriber unit. Each distribution center forwards each information packet to each subscriber unit requesting the information channel associated with each information packet.

The Examiner rejected claim 36 as anticipated by Aras, citing to Figures 1a, 1b, 4a, 4b and "columns 5-8." These figures do not teach or suggest a distributed network of

routing elements. Nor is there any hint of a distributed network of routing elements in the passage cited.

Independent claim 36 is not anticipated by Aras. Claims 37-46 depend from claim 36 and are therefore also patentable.

Independent claim 20 discloses a system for providing high-speed packetized information. A distributed routing network includes a plurality of distribution points, each in radio contact with at least one other distribution point. At least one of the distribution points includes at least one host digital terminal (HDT) for converting high-speed information packets to an optical format and forwarding the information packets to subscriber units.

The Examiner rejected claim 20 as an obvious combination of Aras and Norman. Once again, the Examiner relies on Aras to teach Applicants' distribution points. There is no teaching or suggestion in Aras for any kind of routing network whatsoever, let alone Applicants' distributed network of distribution points in radio contact. The Examiner states that Aras' lack of disclosure regarding an HDT is compensated for by Norman. Norman discloses the use of wireless optical links. However, as is well known in the art, such links are not suitable for high-speed information packets. An HDT communicates through optical fibre. (See, page 9, line 23, through page 10, line 2.) Since neither Aras nor Norman teach or fairly suggest Applicants' wireless distribution point that includes at least one HDT, the Examiner has failed to establish a *prima facie* case.

Independent claim 20 is patentable over any combination of Aras and Norman. Claims 21-27 depend from claim 20 and are therefore also patentable.

Applicants filed Information Disclosure Statements in this case on June 28, 2000, June 7, 2001, and January 13, 2004, the last electronically. Applicants note that the Examiner has not provided an initialed copy of these disclosures indicating that the art has been considered.

It is respectfully requested, in the event that another Office Action rejecting the claims in the case is mailed, that the Examiner find a specific teaching in the art cited for each element of Applicants' claims. Applicants request that the Examiner refrain from citing

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multiple columns and/or making general references to multiple figures as the sole support for the rejections. The burden is on the Examiner to establish a prima facie case, a burden that can only be met by finding teachings for each and every element claimed.

Claims 10-46 are pending in this application. Applicants believe these claims meet all substantive requirements for patentability and therefore request that this case be passed to issuance. No fee is believed due by filing this amendment. However, any fee due may be withdrawn from Deposit Account No. 21-0456 as specified in the Application Transmittal.

The Examiner is invited to contact the undersigned to discuss any aspect of this case.

Respectfully submitted,

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